

Figure 1: Signal Recognition System

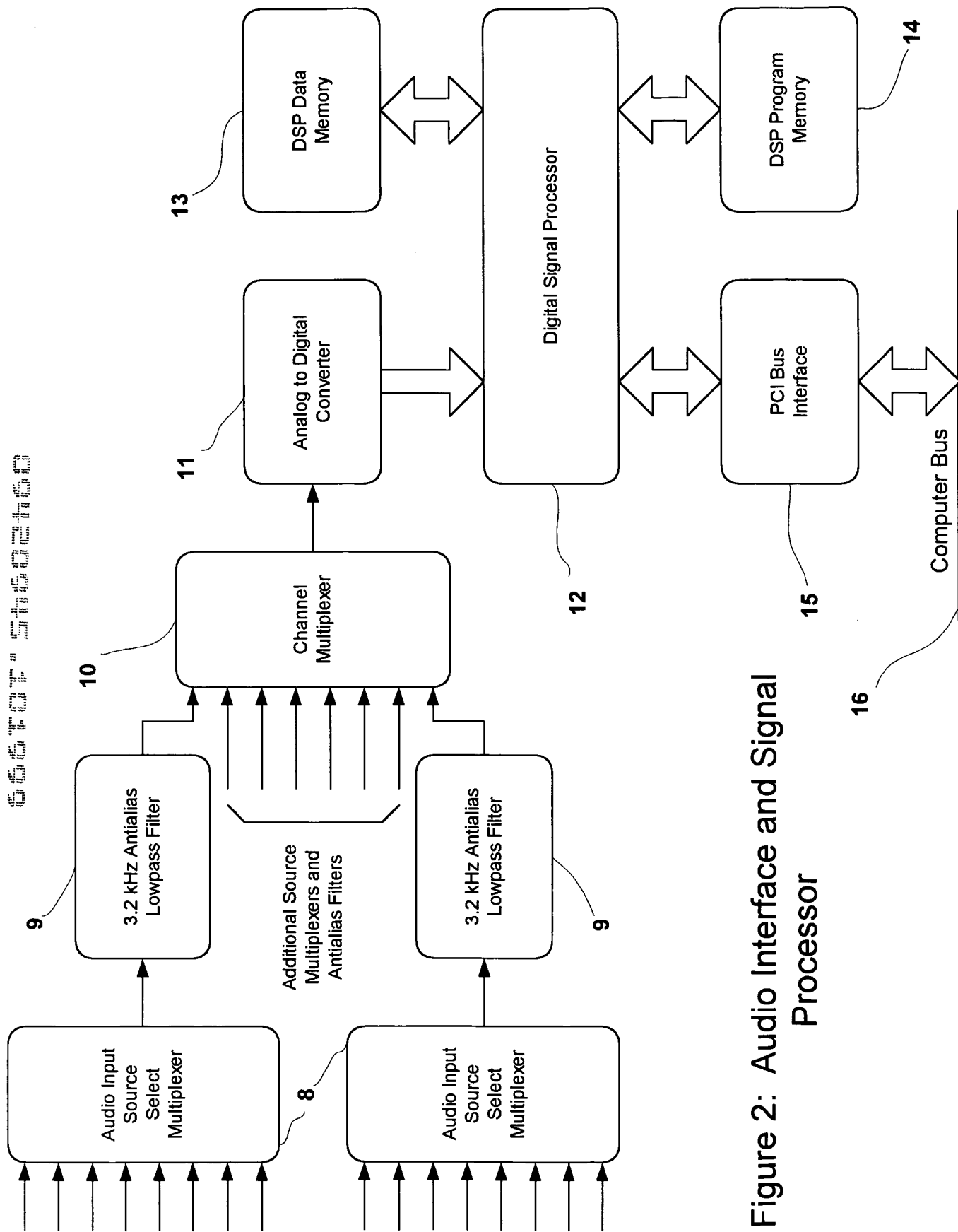


Figure 2: Audio Interface and Signal Processor

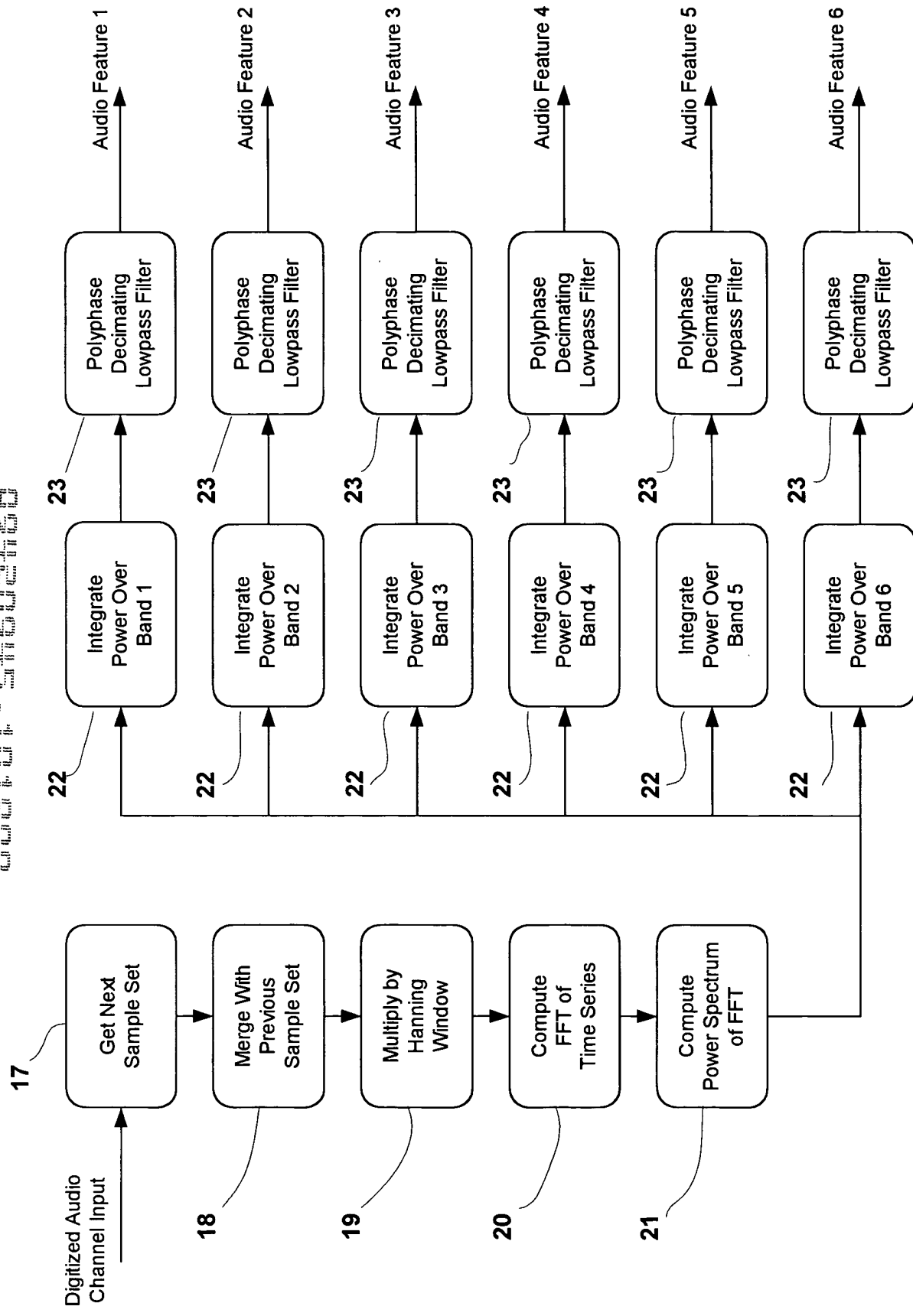


Figure 3: Audio Spectrum Analysis and Feature Extraction

6667 " 34466

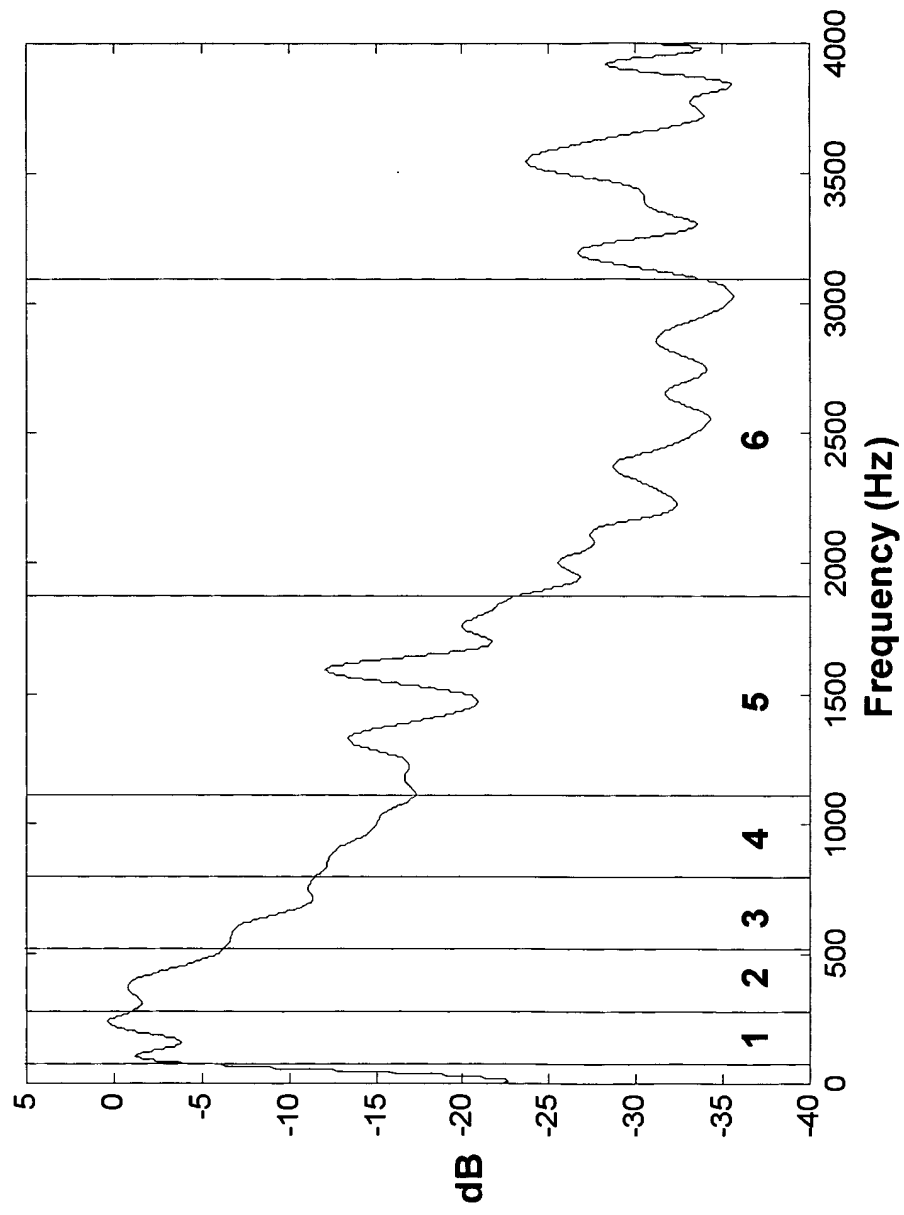


Figure 4: Audio Spectrum Analysis Bands

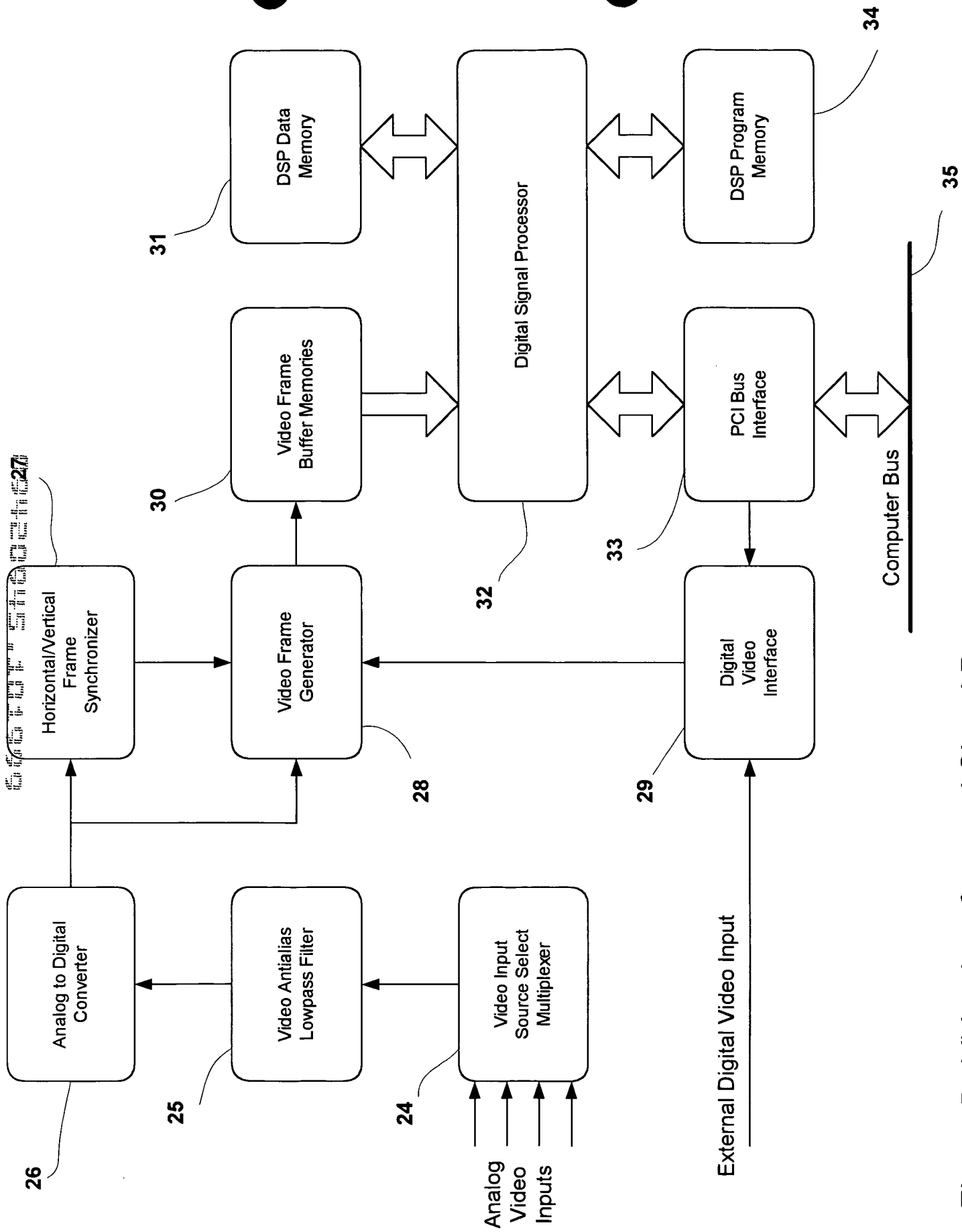


Figure 5: Video Interface and Signal Processor

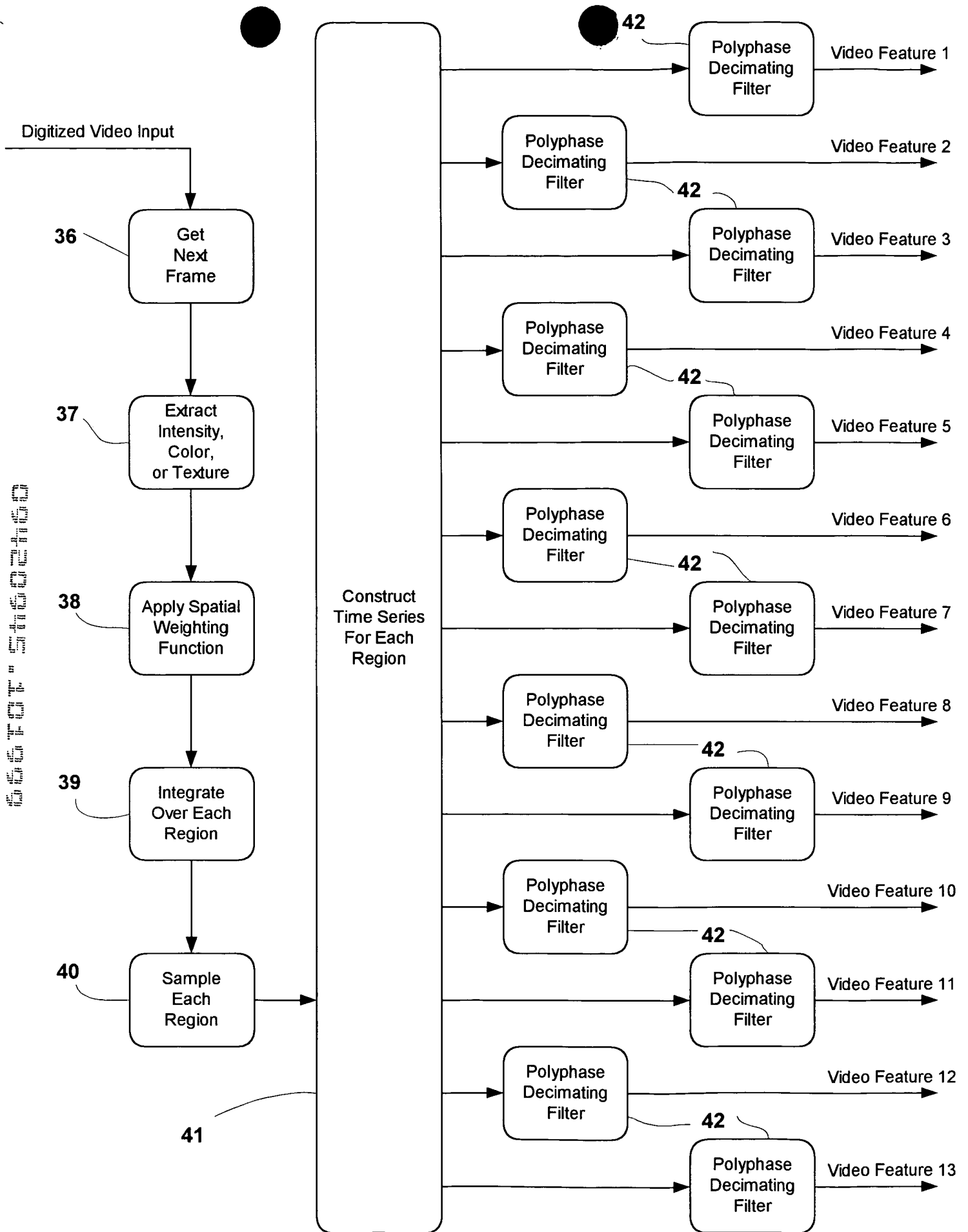


Figure 6: Video Pre-Processing and Feature Extraction

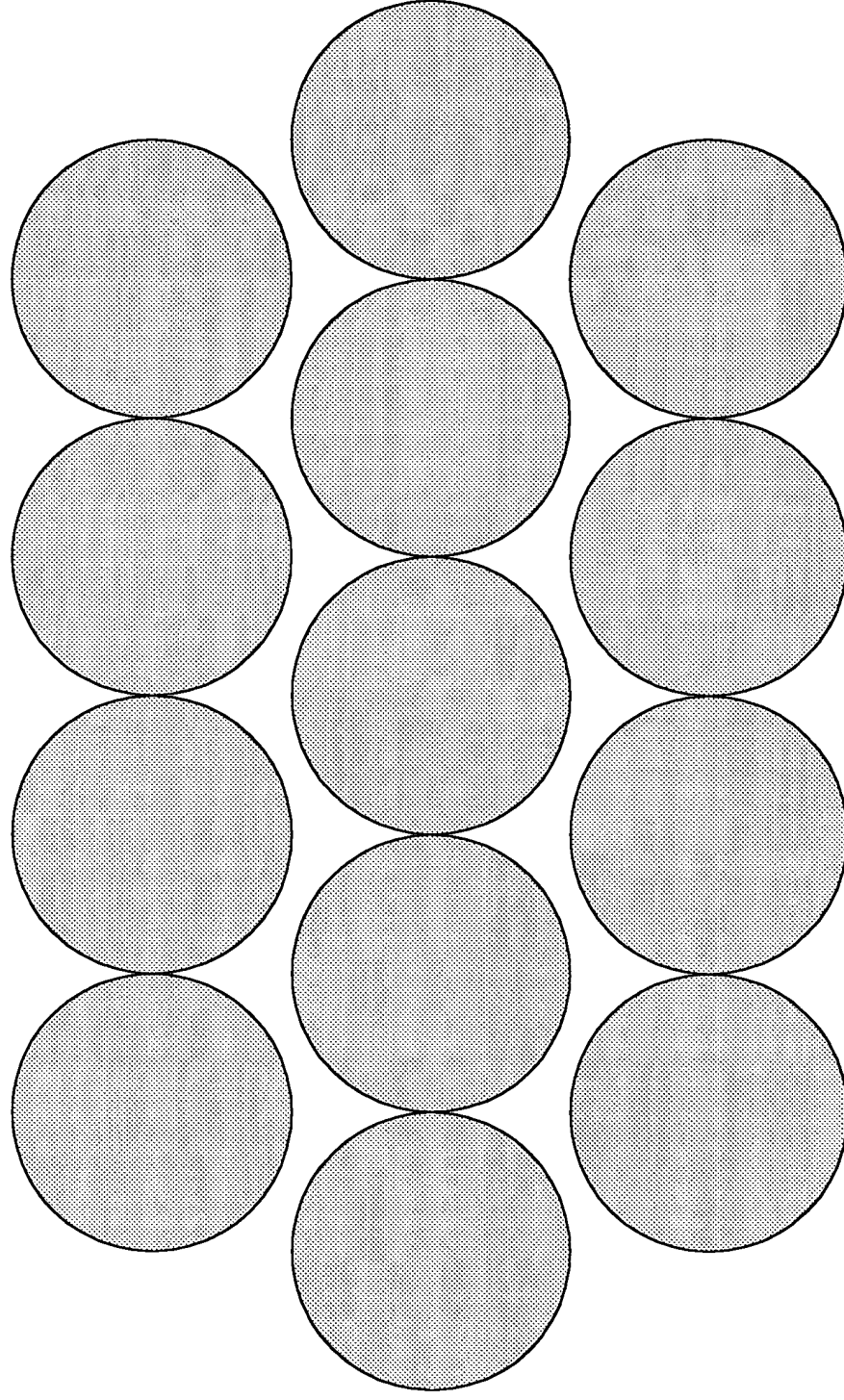
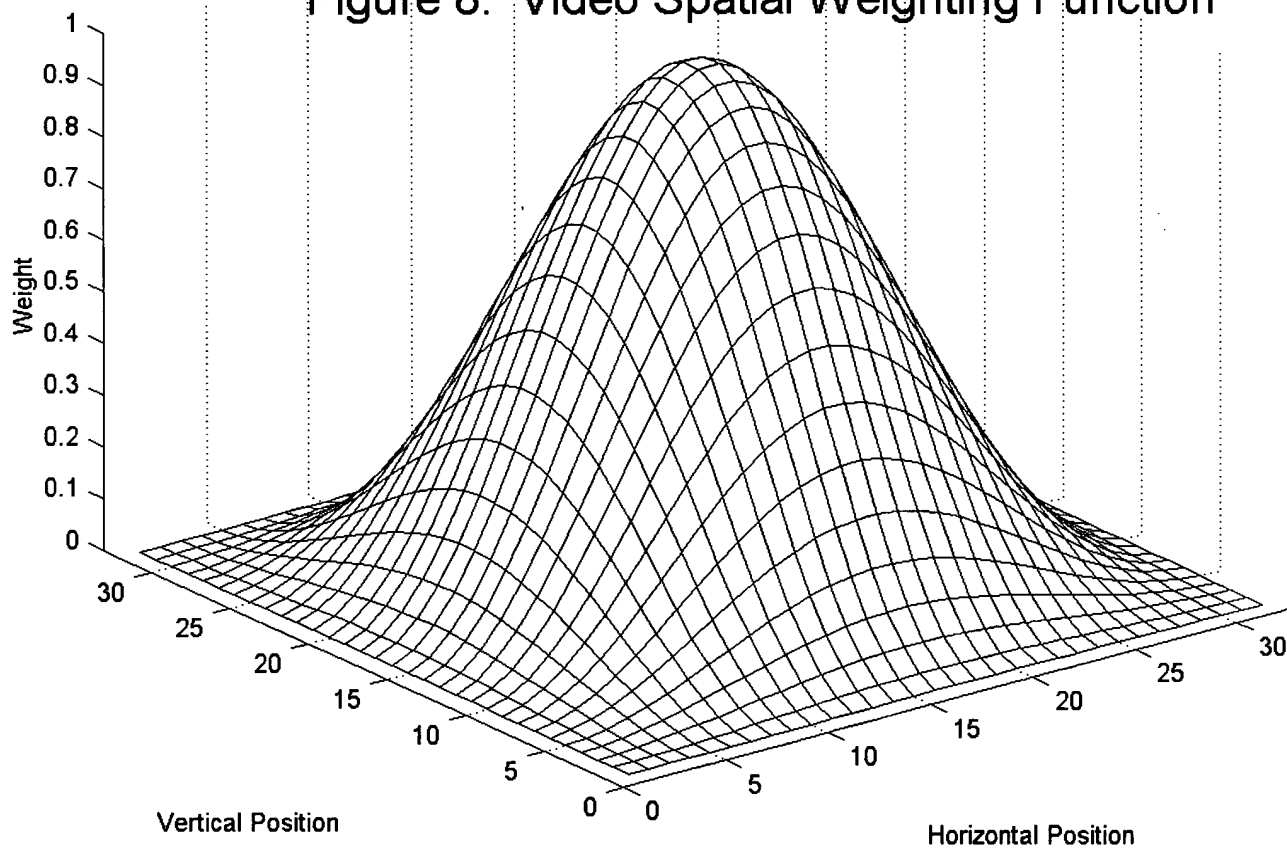


Figure 7: Video Feature Extraction Regions

Figure 8: Video Spatial Weighting Function



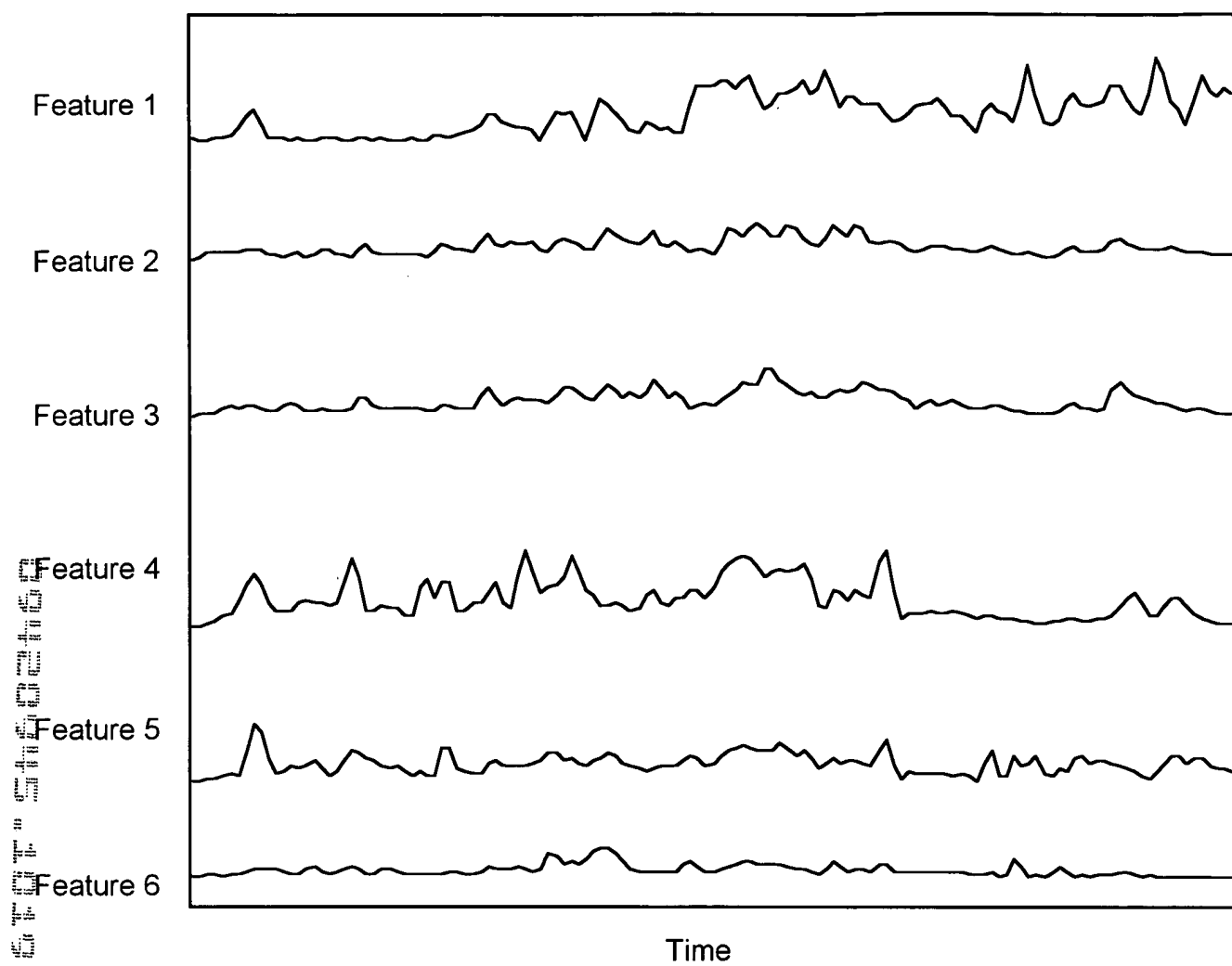


Figure 9: Example Feature Waveforms

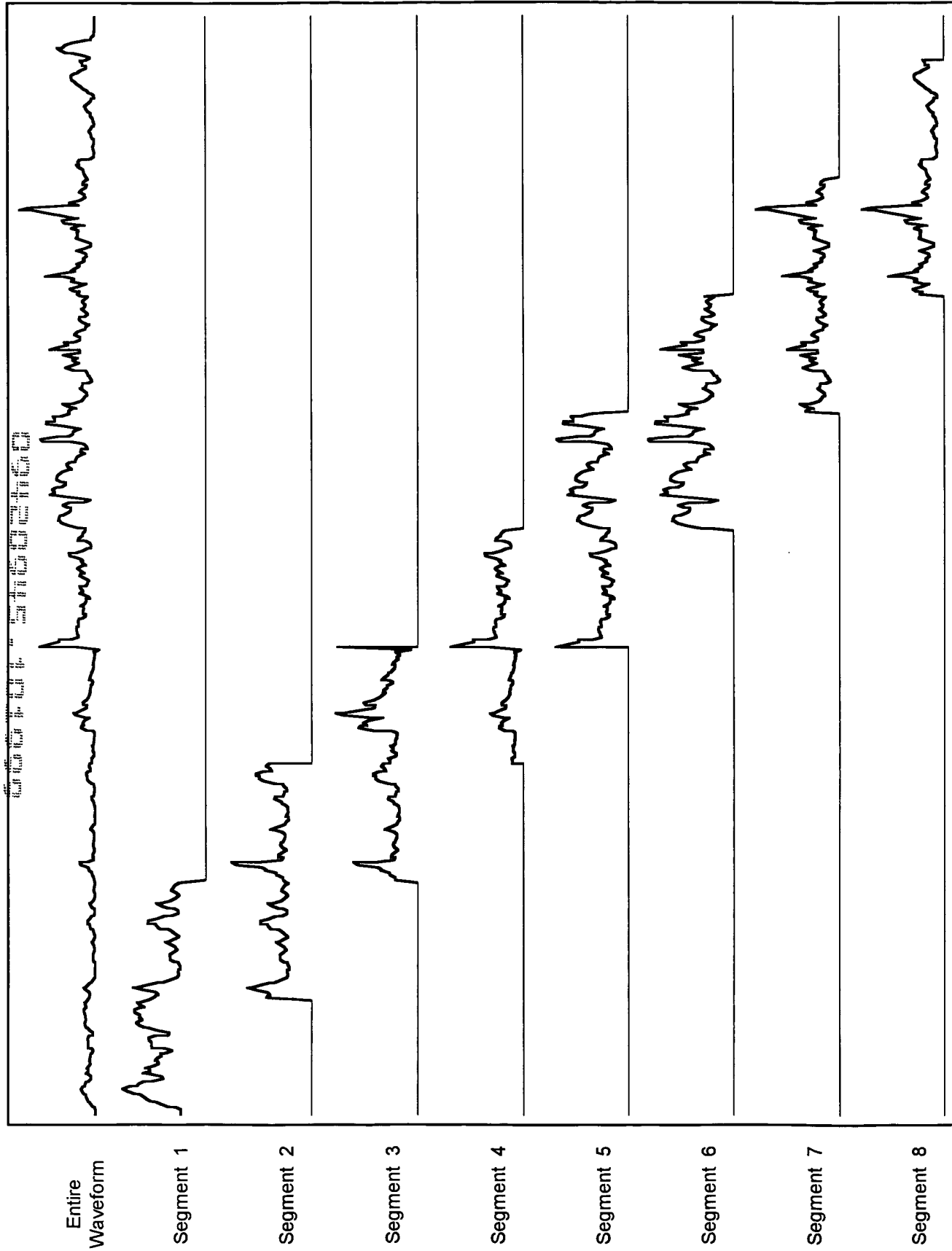


Figure 10: Reference Feature Waveform Segmentation

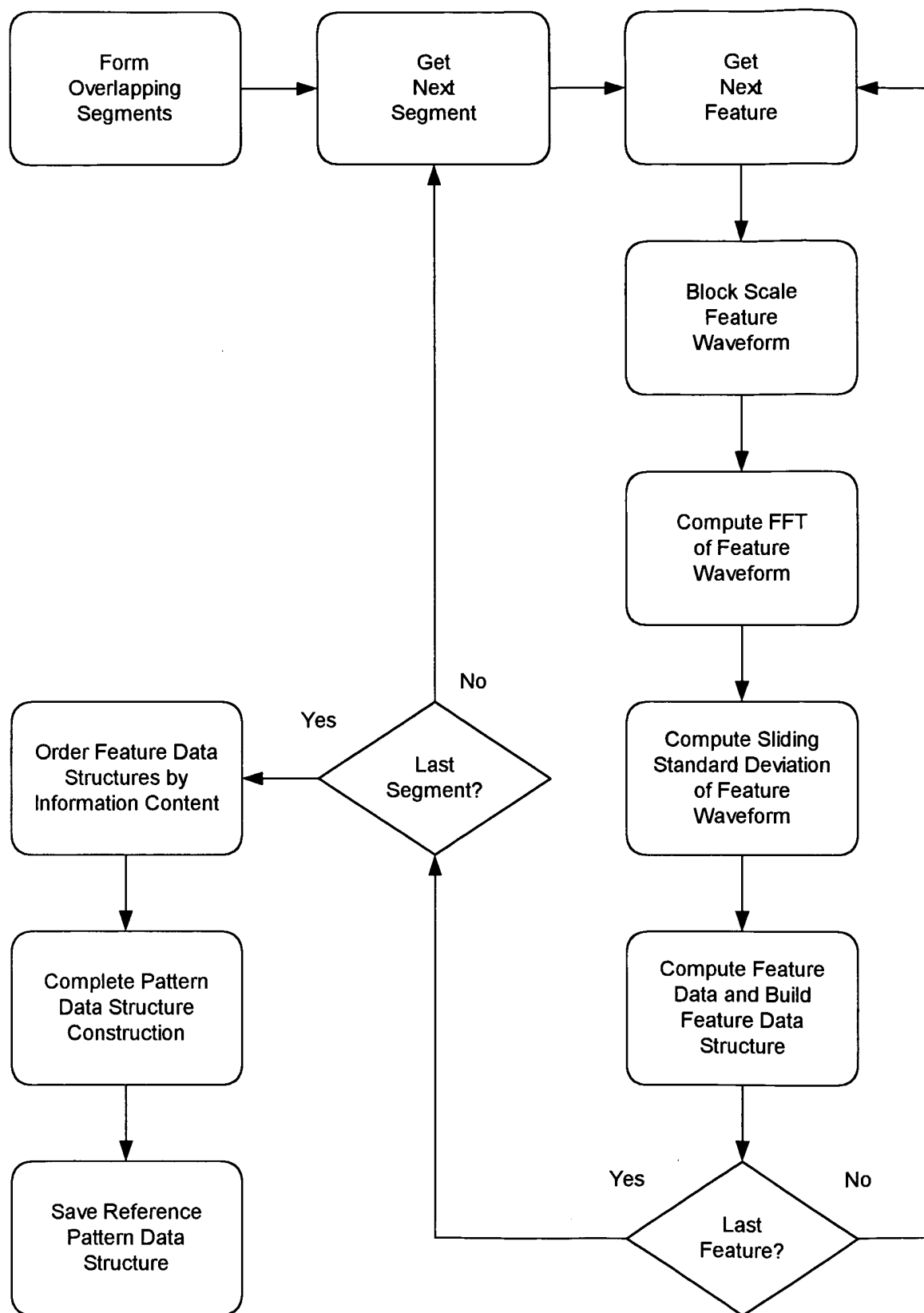


Figure 11: Reference Pattern Initialization

Database Structure

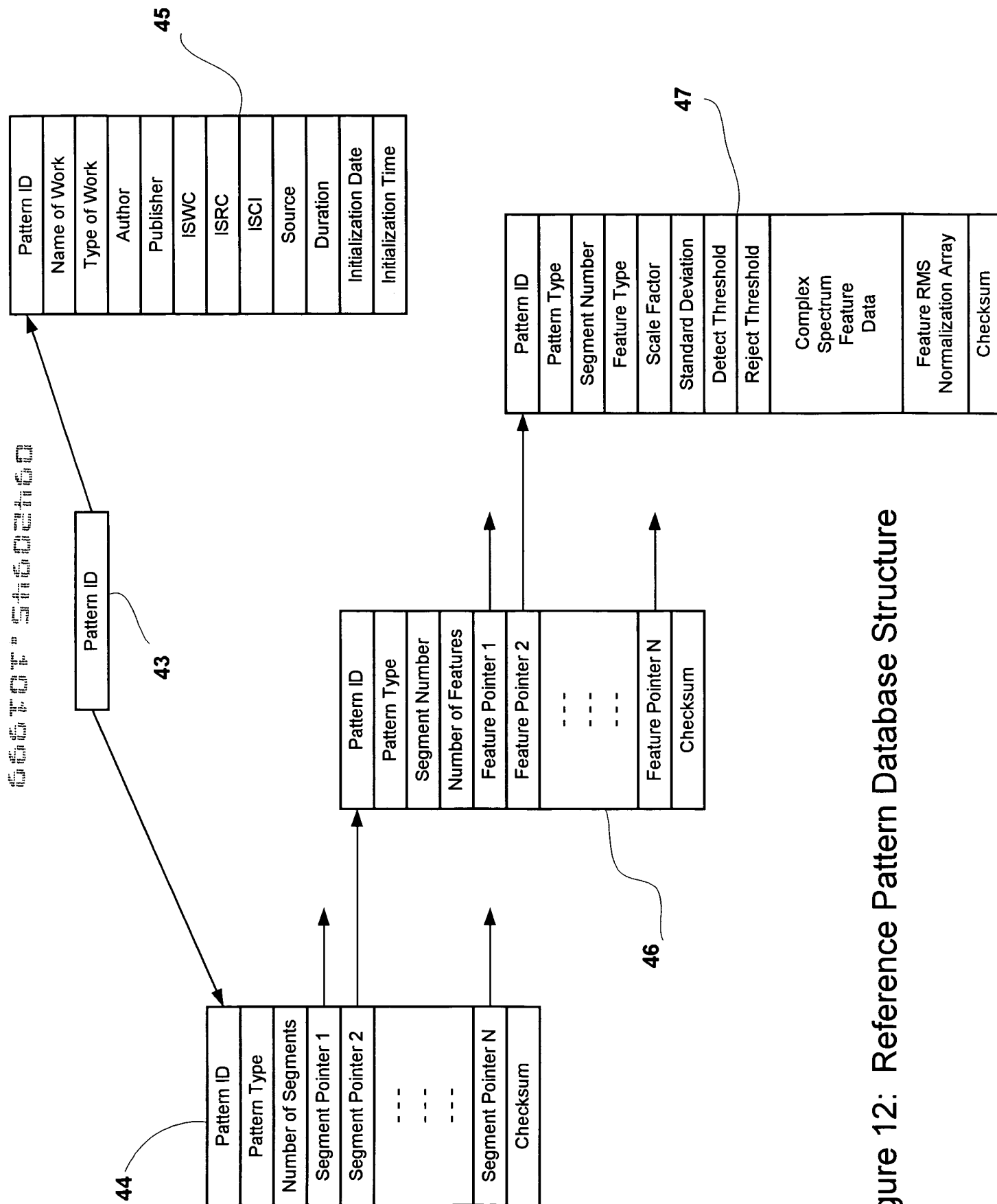


Figure 12: Reference Pattern Database Structure

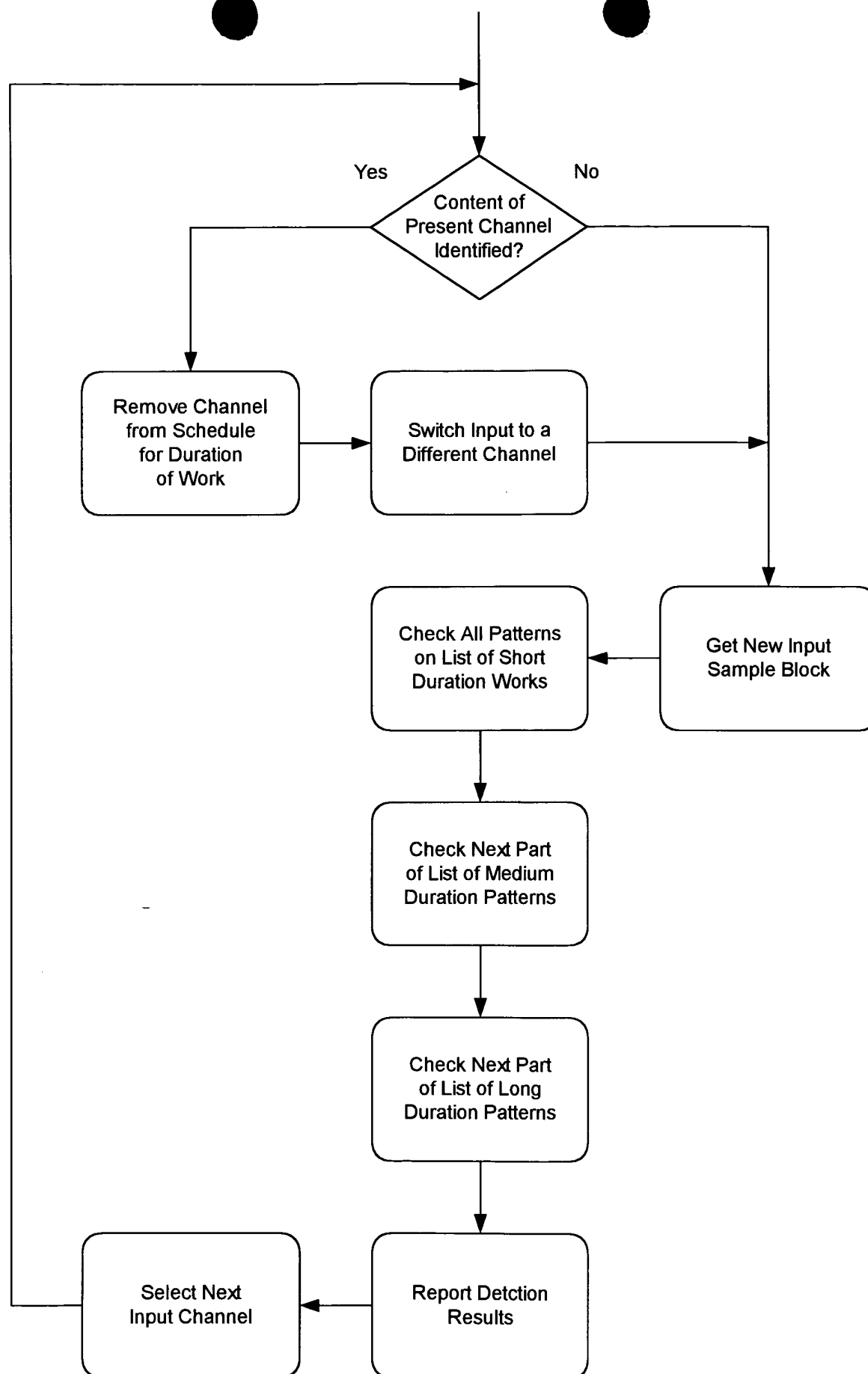


Figure 13: Input Channel and Pattern Scheduler

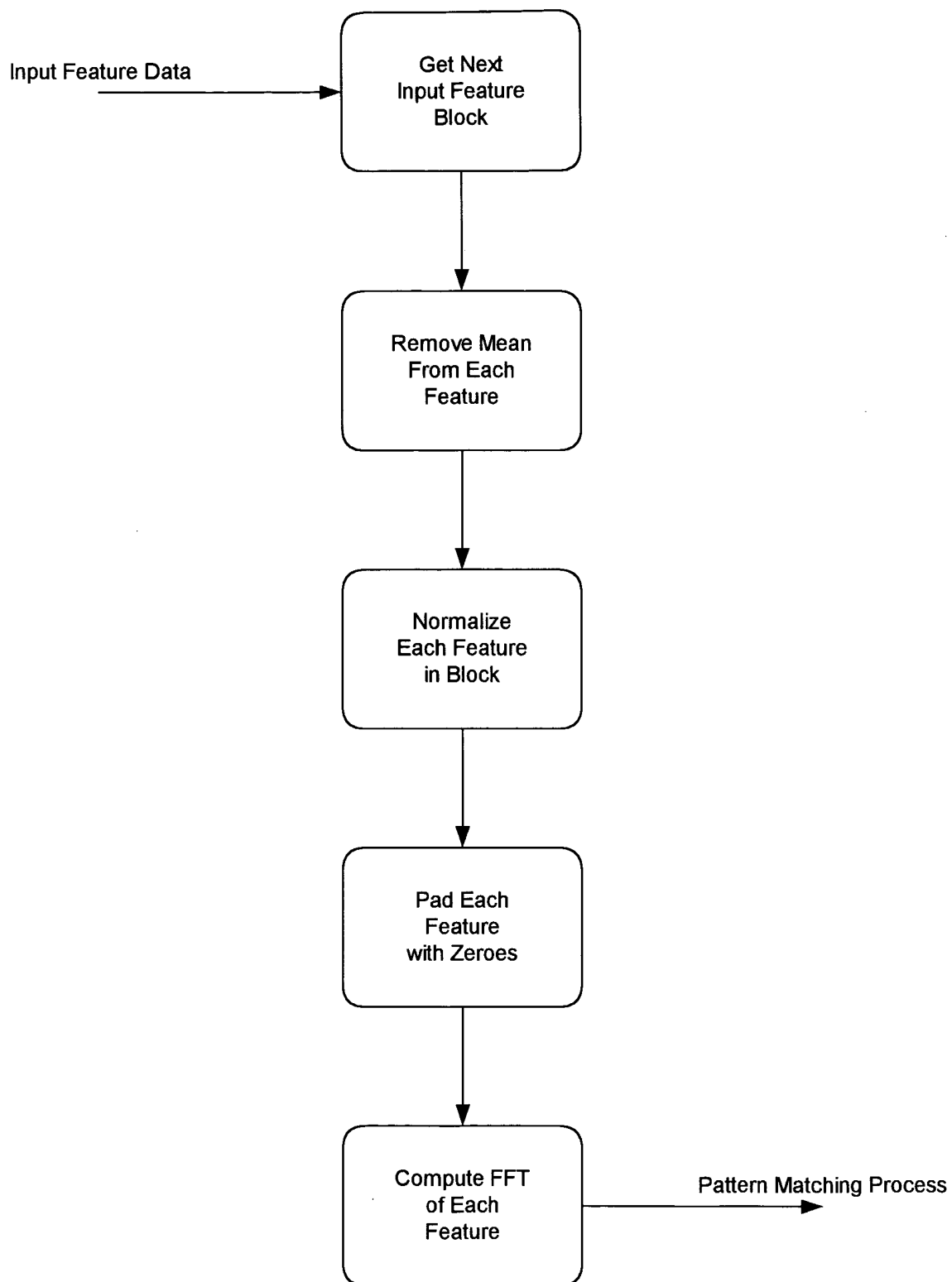


Figure 14: Real-Time Feature Block Pre-Processing

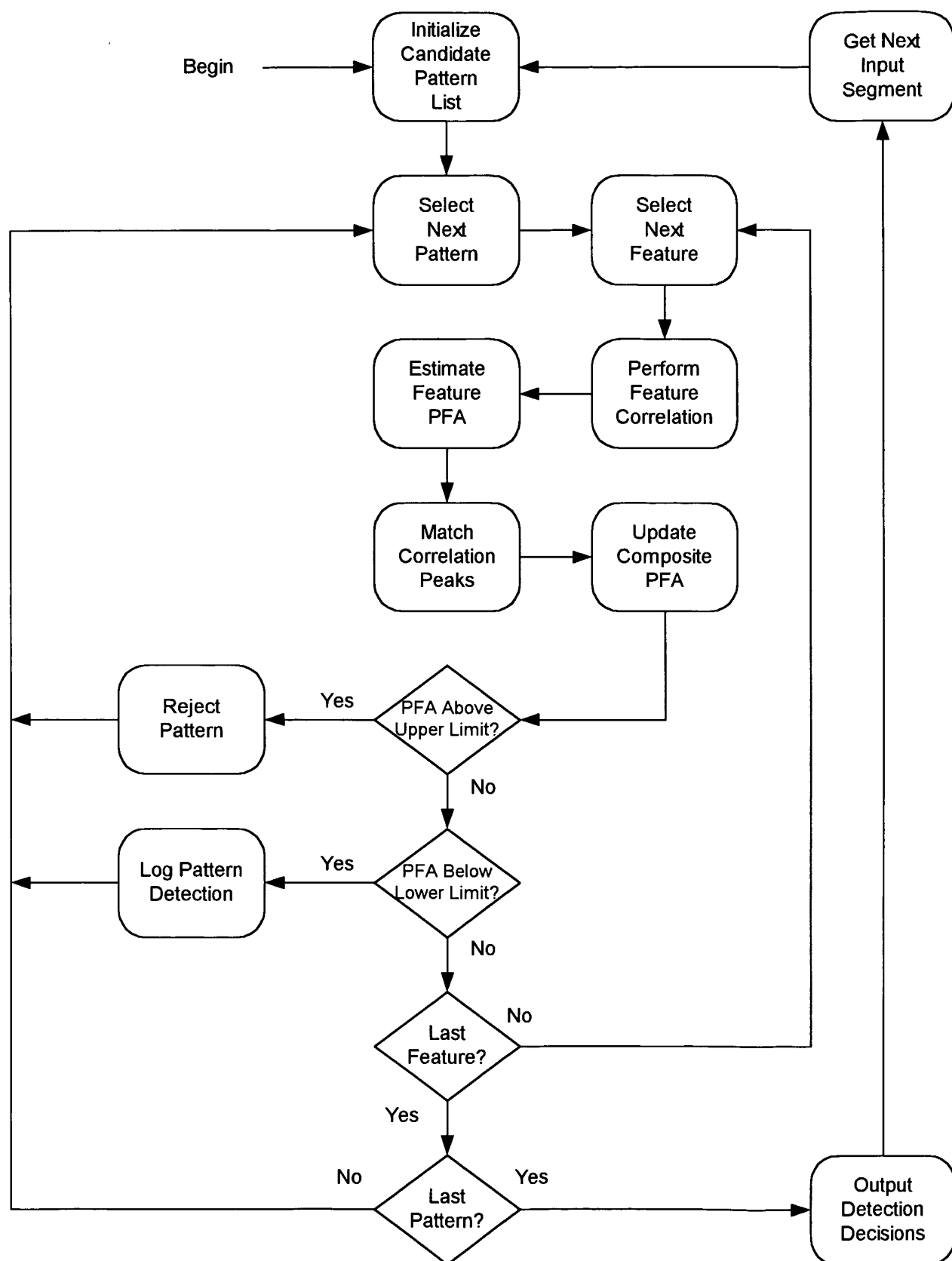


Figure 15: Multiple Feature Correlation Process

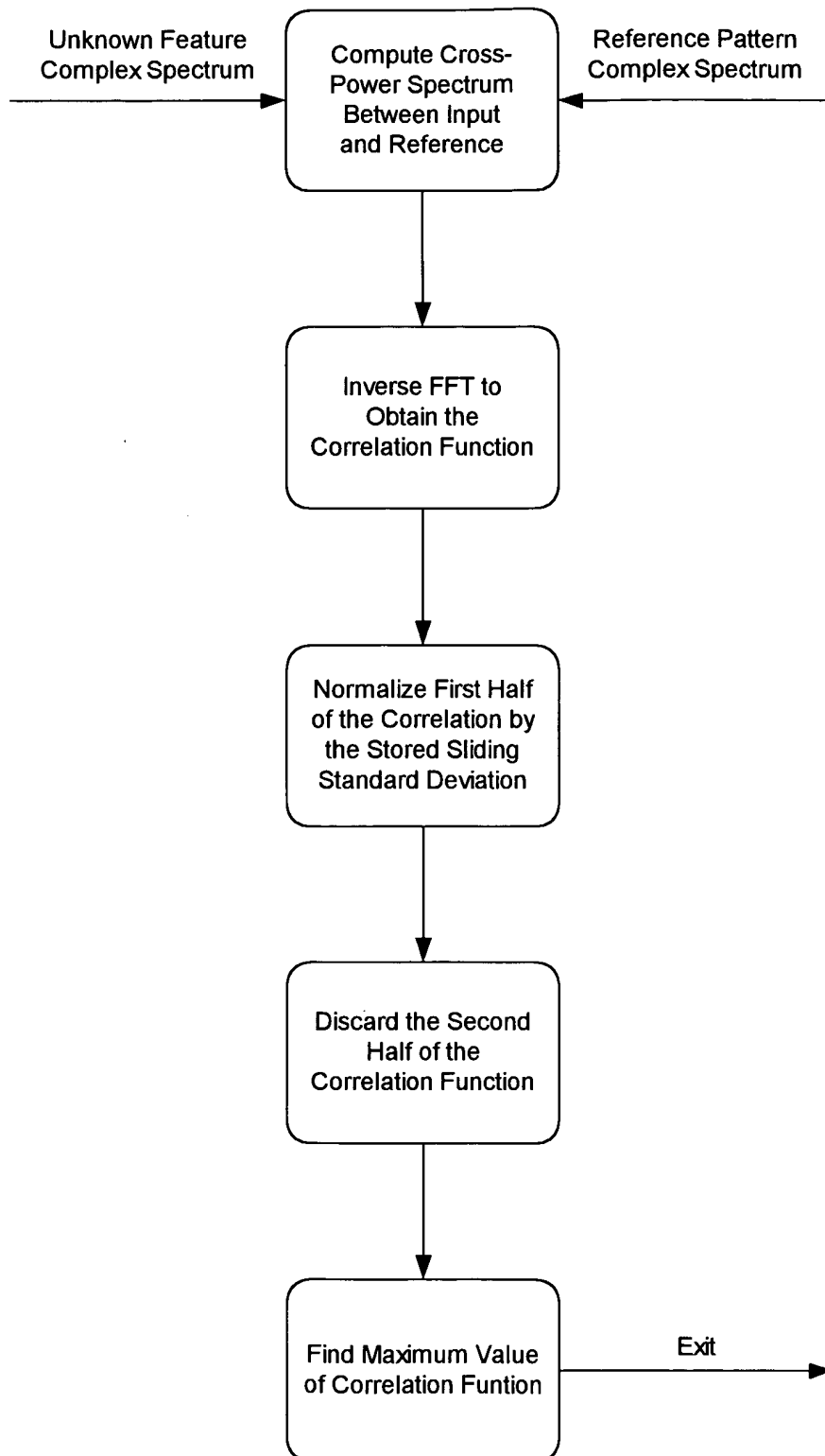


Figure 16: Feature Correlation Process

66707 " 5763462

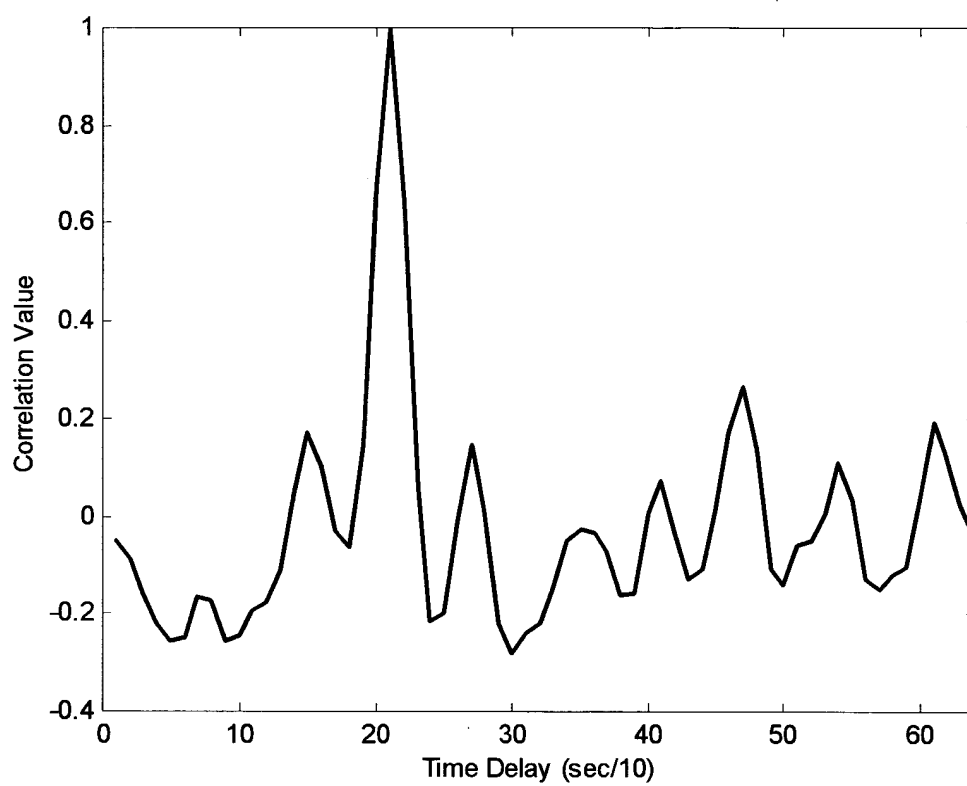
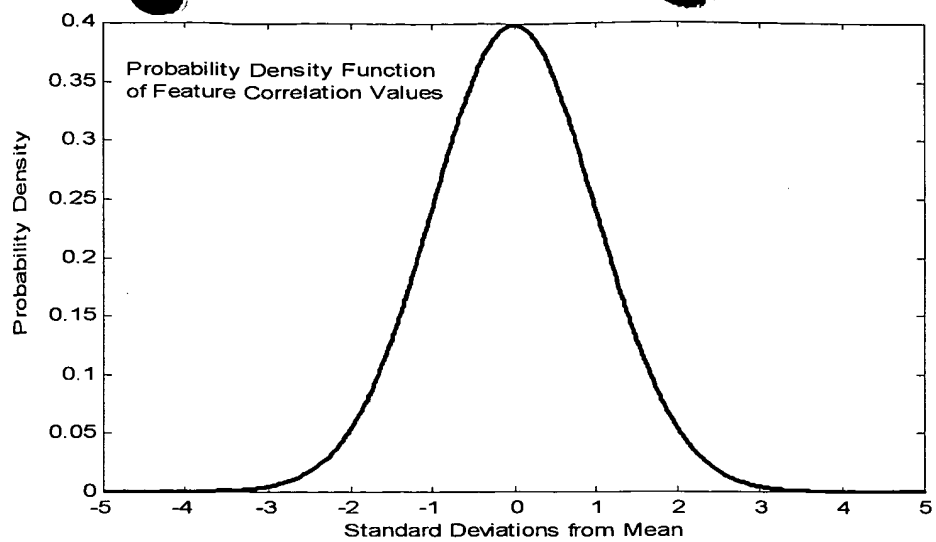
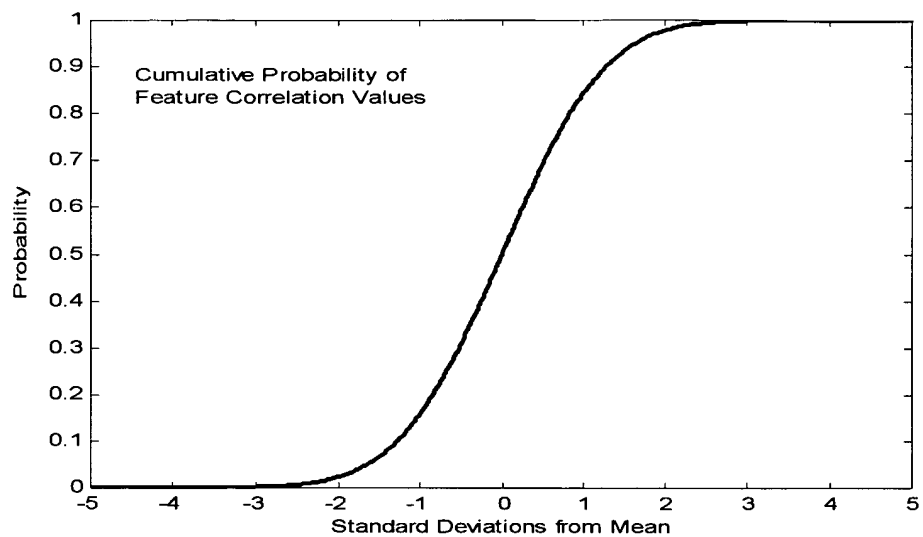


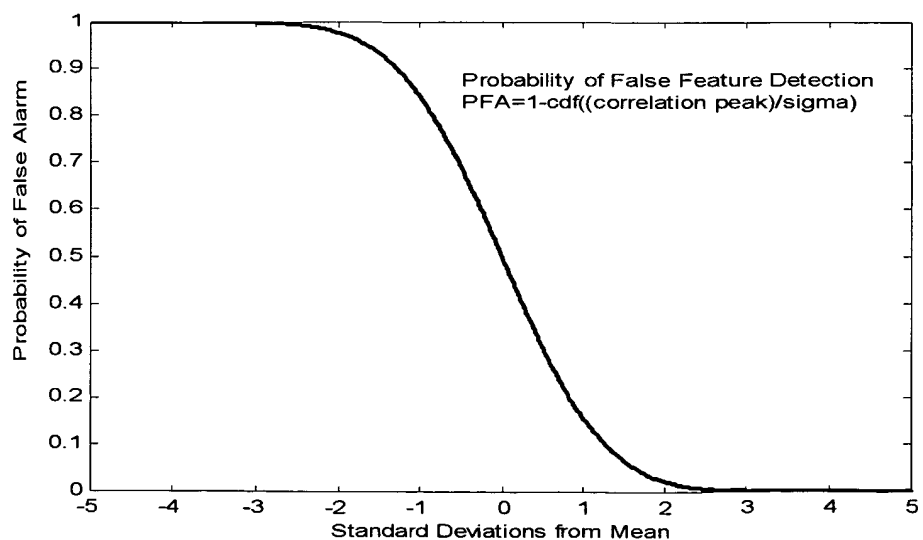
Figure 17: Example Feature Correlation Function



(A)



(B)



(C)

Figure 18: False Detection Estimation from Correlation Values